

We claim

1. A process for the manufacturing of a decorative surface element with surface structure, which element comprises a core material, a decorative surface layer and a protective upper wear layer, where at least one of said decorative surface layer and said wear layer comprises a thermosetting resin, wherein the process comprises the steps;
 - a) providing the upper surface of the core material with a surface structure,
 - b) applying the decorative surface layer on top of the surface structured core,
 - c) applying the protective wear layer on the decorative surface layer,
 - d) pressing the core material, decorative layer and wear layer under increased pressure and temperature in a laminate press so that resin cures and the different layers are bonded to one another.
2. A process according to claim 1 wherein the surface structure of the core material is achieved by machining a desired surface into the upper surface of the core material.
3. A process according to claim 1 wherein the surface structure of the core material is achieved by pressing a structured press plate or press roller on top of the upper surface of the core material.
4. A process according to claim 1 wherein the surface structure of the core material is achieved by partially wetting the upper surface of the core material with a solvent.

5. A process according to claim 1 wherein the surface structure of the core is achieved by wetting the upper surface of the core material with a solvent whereupon a structured press plate or roller is pressed onto said upper surface.
6. A process according to claim 1 wherein the surface structure of the core material is achieved by rolling the core material between at least one surface structured calendar roller and a counter-stay roller.
7. A process according to claim 1 wherein the decorative surface layer comprises a cellulose sheet impregnated with an amino resin selected from the group consisting of melamine formaldehyde resin, urea formaldehyde resin and mixtures thereof.
8. A process according to claim 1 wherein the wear layer comprises a cellulose sheet impregnated with an amino resin selected from the group consisting of melamine formaldehyde resin, urea formaldehyde resin and mixtures thereof.
9. A process according to claim 8 wherein the wear layer further comprises hard particles selected from the group consisting of aluminium oxide, silicon oxide and silicon carbide having an average particle size in the range 50 nm - 150 μ m
10. A process according to claim 8 or 9 wherein the uppermost surface of the wear layer is provided with hard particles selected from the group consisting of aluminium oxide, silicon oxide and silicon carbide having an average particle size in the range 50 nm - 30 μ m.

11. A process according to claim 1 wherein a press cushion is arranged on top of the wear layer during the pressing.
12. A process according to claim 1 wherein a press plate having a surface structure matching the surface structure of the core material is arranged on top of the wear layer during the pressing.
13. A process according to claim 1 wherein a press foil provided with a micro structure is arranged on top of the wear layer during the pressing.
14. A process according to claim 1 wherein a press cushion is arranged between the press foil and the press during the pressing.
15. A process according to claim 1 wherein the base layer consists of a particle board or a fibre board.